

Montana Department of Natural Resources and Conservation  
Water Resources Division  
Water Rights Bureau

**ENVIRONMENTAL ASSESSMENT**  
**For Routine Actions with Limited Environmental Impact**

**Part I. Proposed Action Description**

Applicant/Contact name: **Checkerboard Cattle Company, LLC**  
**315 Groveland Street**  
**Orlando FL, 32804-4052**

1. Type of action: **Application to Change a Water Right No. 40A 30114296**
2. Water source name: **North Fork Musselshell River**
3. Location affected by project: **The proposed project is in Meagher County, about 7 miles northwest of Martinsdale, Montana. Area of interest includes Sections 14, 15, 23 & 24, T9N, R10E and Sections 19, 30 & 31, T9N, R11E, Meagher County.**
4. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

**Applicant proposes to change the place of use for Statement of Claim No. 40A 29388 to include the addition of a 125.0-acre center pivot (41.0 acres of the proposed pivot lie within historic flood-irrigated acreage, and 84.0 acres lie outside the historic place of use). Additionally, Applicant proposes to reduce its place of use from 780.0 acres to 410.0 acres, a reduction of 370 acres. The final project, if authorized, will include 156 acres of flood irrigation and 254 acres of pivot irrigation (129 acres of historic flood irrigation are currently irrigated by two half pivots not proposed for change).**

*The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.*

5. Agencies consulted during preparation of the Environmental Assessment:  
(include agencies with overlapping jurisdiction)

**Dept. of Environmental Quality Website - TMDL 303d listing**  
**MT. National Heritage Program Website - Species of Concern**  
**USDI Fish & Wildlife Service Website - Endangered and Threatened Species**  
**MT State Historic Preservation Office - Archeological/Historical Sites**  
**USDA Natural Resources Conservation Service – Web Soil Survey**  
**USDI Fish & Wildlife Service – Wetlands Online Mapper**

**Part II. Environmental Review**

1. Environmental Impact Checklist:

**PHYSICAL ENVIRONMENT**

**WATER QUANTITY, QUALITY AND DISTRIBUTION**

**Water quantity** - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

*Determination:*           **No Significant Impact.**

**The source of water is the North Fork Musselshell River, which has been declared chronically dewatered under MCA 85-2-150. Because of this situation, any added burden on the source of supply would represent an adverse effect to other water users. The Department's assessment of the proposed change is that the diverted volume will be reduced from 2157 AF to 1270 AF while the estimated consumptive use will remain essentially the same. The source is regulated by water commissioners associated with the Musselshell Distribution Project and the Applicant will likely be required to adhere to a Department measurement condition. This project should not have a significant impact on surface water quantity in the North Fork Musselshell River.**

**Water quality** - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

*Determination:*           **No Significant impact.**

**The reach of the North Fork Musselshell River near this project has been designated as needing a TMDL plan. The DEQ website for water quality information identifies impairments to aquatic life and primary contact recreation probably caused by natural causes, abandoned mine impacts, on-site treatment systems and riparian grazing. No significant impacts to water quality are anticipated because of this project, assessed impacts are not shown to be caused by irrigation and the place of use under the proposed project will be reduced when compared to past agriculture practices.**

**Ground water** - Assess if the proposed project impacts ground water quality or supply. If this is a ground water appropriation, assess if it could impact adjacent surface water flows.

*Determination:*           **No Significant Impact.**

**The proposed change should not have a significant impact on groundwater quality or supply. The proposed place of use for the new pivot irrigation may realize a minor increase in seasonal water table elevations; in turn, the potentiometric water surface under acres being retired from flood irrigation should see a decrease in seasonal elevations.**

**DIVERSION WORKS** - Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

*Determination:*           **No Significant Impact.**

**The proposed means of diversion is a headgate and ditch that is capable of conveying the Applicant's flow rate of 6.11 CFS. This infrastructure has been used historically and will continue to provide flood irrigation water for 156 acres. A Cornell pump with 8-inch pipeline will be used as a secondary diversion to supply water to the 254 acres of pivot irrigation. Pivot irrigation is more efficient application of water than flood irrigation and the conveyance systems are largely in place. No further impacts due to diversion works are expected because of this project.**

**UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

***Endangered and threatened species*** - Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."

*Determination:*           **No Significant Impact.**

**The Montana National Heritage Program website currently lists the Wolverine, eight bird species and a snail as Species of Concern within Township 9 North Range 10 East. The website also lists four bird species and two fish as Species of Concern within Township 9 North Range 11 East. There is one known Plant Species of Concern listed in the area of interest, the Long-styled Thistle.**

**The 2018 USDI Fish & Wildlife Service Report indicates that Meagher County has two species listed as threatened, the Canada Lynx and Grizzly Bear. The Wolverine is shown as a proposed species and the Whitebark Pine is a candidate species. Since this project is associated with ground that has been previously used for agriculture; there is a low likelihood of impact to endangered or threatened species because of this appropriation.**

***Wetlands*** - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

*Determination:*           **No Significant Impact.**

**With the exception of the 84 acres of new pivot irrigation, the acreage involved in this application has been previously farmed. In addition, the 84 acres that are proposed for pivot irrigation are on a small intermittent drainage that typically only flows during the spring and early summer. The USDI Fish & Wildlife Service – Wetlands Online Mapper shows Freshwater Emergent Wetlands throughout the Applicant's property adjacent to the source and conveyance ditches, but they are generally located under the historical irrigation and should not be significantly affected by the proposed project.**

***Ponds*** - For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.

*Determination:*           **No Significant Impact.**

**This project does not involve a pond. No impact to wildlife, waterfowl, or fisheries is anticipated.**

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

*Determination:*           **No Significant Impact.**

**No significant impacts to the soil profile are anticipated. The two predominant soil types in the area of interest are the Crago-Musselshell and the Musselshell-Crago complexes. The soils are well drained with 0.0 ratings for the Sodium Adsorption Ratio indicating a low likelihood of degradation of soil quality, alteration of soil stability, or moisture content.**

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

*Determination:*           **No Significant Impact.**

**Typical construction activities associated to pipeline installation can cause short-term disturbances to vegetative cover; however, there should be no long term or significant impacts because of this project. It is the responsibility of the property owner to control noxious weeds on their property.**

**AIR QUALITY** - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

*Determination:*           **No Significant Impact.**

**It is unlikely air quality will be deteriorated, the pivot irrigation will utilize an electrical motor to power the pump. No impacts to air quality have been identified.**

**HISTORICAL AND ARCHEOLOGICAL SITES** - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

*Determination:*           **No Significant Impact.**

**Not Applicable – Project not located on State or Federal Lands**

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

*Determination:*           **No Significant Impact.**

**No additional impacts are anticipated.**

## HUMAN ENVIRONMENT

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

*Determination:*           **No Significant Impact.**

**No locally adopted environmental plans or goals have been identified.**

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.

*Determination:*           **No Significant Impact.**

**This proposal should not impact recreational activities in the area.**

**HUMAN HEALTH** - Assess whether the proposed project impacts on human health.

*Determination:*           **No Significant Impact.**

**No impacts to human health have been identified.**

**PRIVATE PROPERTY** - Assess whether there are any government regulatory impacts on private property rights.

Yes \_\_\_ No X \_\_\_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

*Determination:*           **No Significant Impact.**

**OTHER HUMAN ENVIRONMENTAL ISSUES** - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

*Impacts on:*

- (a) Cultural uniqueness and diversity?           **None**
- (b) Local and state tax base and tax revenues?           **None**
- (c) Existing land uses?           **Some acres changing from flood to pivot irrigation.**
- (d) Quantity and distribution of employment?           **None**
- (e) Distribution and density of population and housing?           **None**
- (f) Demands for government services?           **None**

- (g) Industrial and commercial activity?      **None**
- (h) Utilities?      **Electrical consumption by pivots.**
- (i) Transportation?      **None**
- (j) Safety?      **None**
- (k) Other appropriate social and economic circumstances?      **None**

**2.      *Secondary and cumulative impacts on the physical environment and human population:***

**Secondary Impacts - Department analysis finds less return flows are expected in the riparian zone along the North Fork Musselshell River due to the conversion from flood to pivot irrigation. Although the Applicant proposes to divert less volume with the pivot systems, timing of the return flow regime will also be modified. Secondary impacts are expected to be minor, more water will be available in the stream during periods of pivot diversion and consumptive use for the new center pivot system as it relates to historic flood irrigation will not change.**

**Cumulative Impacts - More and more historic acres are being converted to center pivot sprinkler irrigation to facilitate better water management, increased production and reduced labor. Water is more easily managed with a pivot and application rates can be matched to the landowners' specific soil characteristics. Generally, acres under a center pivot system will experience increased production compared to flood acres, which in turn increases crop water consumption. In this instance, the Applicant will be limited to using the same consumptive use after conversion to pivot irrigation, and a water measuring device will aid in controlling the amount of water diverted from the source.**

**3.      *Describe any mitigation/stipulation measures:***

**No mitigation or stipulation measures have been identified by the Applicant. The Department may impose a measurement condition to ensure required criteria are met.**

**4.      *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

**No action alternative: Deny the application. This alternative would result in none of the benefits being realized by the Applicant.**

***PART III. Conclusion***

***1.      Preferred Alternative***

**The preferred alternative is the proposed alternative.**

2 *Comments and Responses*

**None Received.**

3. ***Finding:***

Yes\_\_\_ No **X** *Based on the significance criteria evaluated in this EA, is an EIS required?*

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:*

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.

*Name of person(s) responsible for preparation of EA:*

*Name:* Douglas Mann

*Title:* Hydrologist – LRO

*Date:* 9/21/2018